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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,970	03/31/2004	Paul Philip Brown	155-21	5922

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EXAMINER	
HUSON, MONICA ANNE	
ART UNIT	**PAPER NUMBER**
1732	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/813,970	BROWN ET AL.	
	Examiner	Art Unit	
	Monica A. Huson	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 April 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 12-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 March 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the amendment filed 19 April 2006.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Cole (U.S. Patent 4,541,795). Regarding Claim 1, Cole shows that it is known to carry out a method for manufacturing a hollow plastic product with two open ends and a substantially tubular section (Figure 2), the process comprising the steps of a. providing a cavity mold part that includes a generally cylindrical portion for forming at least an outside segment of a substantially tubular section of a molded hollow plastic product that has one open end, one closed end, and a substantially tubular section (Figure 3, e.g. element 107); b. providing a core mold part that includes a generally cylindrical portion for forming at least an inside segment of the substantially tubular section of the molded plastic product (Figure 3, e.g. element 119); c. combining the cavity mold part with the core mold part to configure a mold cavity for forming the molded plastic product (Figure 3); d. injecting plastic material into the mold cavity to form the molded plastic product (Column 8, lines 57-59); e. separating the core mold part from the cavity mold part while retaining the molded plastic product on the core mold part (Column 8, lines 65-68;

Figure 4); f. removing the molded product from the core mold part (Figures 5, 6; Column 9, lines 16-18); g. after step f., removing at least a portion of the closed end of the molded plastic product to provide a manufactured hollow plastic product with two open ends and a substantially tubular section (Figure 2; Column 3, lines 30-39; Column 5, lines 11-53); wherein step f. comprises injecting compressed air into the closed end of the molded product to thereby at least help remove the molded product from the core mold part (Column 6, lines 39-46; Column 7-14; Column 9, lines 54-62).

Regarding Claim 2, Cole shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein step f. comprises the step of h. including injecting compressed air through the core mold part into the closed end of the molded product (Column 6, lines 39-46; Column 7-14; Column 9, lines 54-62).

Regarding Claim 3, Cole shows the process as claimed as discussed in the rejection of Claim 1 above, including a method wherein the product further includes a thread at the outside of one end of the product (Figure 1), wherein step a. comprises h. providing a said cavity mold part that includes a thread-forming portion for forming the thread of product (Figure 3, element 105); wherein step b. comprises the step of i. providing a said core mold part that includes an inner core that is movable relative to the generally cylindrical portion for forming a portion of the product lying inside the thread when the inner core is protracted (Column 7, lines 59-66); wherein step c. further comprises the step of j. protracting the inner core to further configure the mold cavity for forming the product (Figure 3); wherein the process further comprises the step of k. subsequent to the injection of the plastic according to step d., retracting the inner core (Figure

4); and wherein separation of the core mold part from the cavity mold part according to step e. thereby removes the thread from the thread forming portion of the cavity mold part (Figure 6).

Regarding Claim 12, Cole shows that it is known to have an apparatus for manufacturing a hollow plastic product with two open ends and a substantially tubular section (Figure 2), comprising a cavity mold part that includes a generally cylindrical portion for forming at least an outside segment of a substantially tubular section of a molded hollow plastic product that has one open end, one closed end, and a substantially tubular section (Figure 3); a core mold part that includes a generally cylindrical portion for forming at least an inside segment of the substantially tubular section of the molded plastic product (Figure 3); wherein a mold cavity for forming the molded plastic product is configured when the cavity mold part is combined with the core mold part, and the molded product is formed by injecting plastic material into the mold cavity (Figure 3); means for injecting compressed air into the closed end of the molded product to thereby at least help remove the molded product from the core mold after the core mold part has been separated from the cavity mold part while retaining the molded product on the core mold part (Figure 6, e.g. element 115); and manufacturing means for removing at least a portion of the closed end of the molded product after the molded product has been removed from the core mold part to provide a manufactured hollow plastic product with two open ends and a substantially tubular section (Figure 2, e.g. element 26).

Regarding Claim 13, Cole shows the apparatus as claimed as discussed in the rejection of Claim 12 above, including an apparatus wherein the core mold part includes means for channeling compressed air through the core mold part into the closed end of the molded product (Figure 6, e.g. element 115).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cole.

Regarding Claim 4, Cole shows that it is known to carry out a method for manufacturing a hollow plastic product with a substantially tubular section and a thread at the outside of one end of the product (Figure 1), the process comprising the steps of a. providing a cavity mold part that includes a generally cylindrical portion for forming at least an outside segment of a substantially tubular section of a hollow plastic product that also has a thread at the outside of one end of the product and a thread forming portion for forming the thread of the product (Figure 3); b. providing a core mold part that includes a generally cylindrical portion for forming at least an inside segment of the substantially tubular section of the product and an inner core that is movable relative to the generally cylindrical portion for forming a portion of the product lying inside the thread when the inner core is protracted (Figure 3, e.g. element 119, 111; Column 7, lines 59-66); c. combining the cavity mold part with the core mold part and protracting the inner core to configure a mold cavity for forming the product (Figure 3); d. injecting plastic material into the mold cavity to form the molded plastic product (Column 8, lines 57-59); e. retracting the inner core (Figure 4); and f. separating the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part (Figures 4-6).

Although Cole does not explicitly show separating the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded product on the core mold part, he clearly discloses that his movable mold pieces can be moved in any desired sequence, as is well-known in the art (Column 6, lines 60-68). Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to separate the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded product on the core mold part in order to satisfy specific process or end-use requirements.

Regarding Claim 14, Cole shows the apparatus as claimed as discussed in the rejection of Claim 12 above, wherein the product further includes a thread at the outside of one end of the product (Figure 1); wherein the cavity mold part includes a thread forming portion for forming the thread of the product (Figure 3); wherein the core mold part includes an inner core that is movable relative to the generally cylindrical portion for forming a portion of the product lying inside the thread when the inner core is protracted (Figure 3, e.g. element 119, 111; Column 7, lines 59-66); wherein the mold cavity for forming the molded product with a thread at the outside of one end of the product is configured when the cavity mold part is combined with the core mold part and the inner core is protracted (Figure 3); and wherein the apparatus comprises means for separating the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part (Figures 4-6). Although Cole does not explicitly show means for separating the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded

product on the core mold part, he clearly discloses that his movable mold pieces can be moved in any desired sequence, as is well-known in the art (Column 6, lines 60-68). Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to provide means to separate the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded product on the core mold part in order to satisfy specific process or end-use requirements.

Regarding Claim 15, Cole shows that it is known to have an apparatus for manufacturing a hollow plastic product with a substantially tubular section and a thread at the outside of one end of the product (Figures 1-2), comprising a cavity mold part that includes a generally cylindrical portion for forming at least an outside segment of the substantially tubular section of a hollow plastic product that also has a thread at the outside of one end of the product and a thread forming portion for forming the thread of the product (Figure 3); a core mold part that includes a generally cylindrical portion for forming at least an inside segment of the substantially tubular section of the product and an inner core that is movable relative to the generally cylindrical portion for forming a portion of the product lying inside the thread when the inner core is protracted (Figure 3, e.g. element 119, 111; Column 7, lines 59-66); wherein a mold cavity for forming a molded product with a substantially tubular section and a thread at the outside of one end of the product is configured when the cavity mold part is combined with the core mold part and the inner core is protracted, and the molded product is formed by injecting plastic material into the mold cavity (Figure 3; Column 8, lines 57-59); and means for separating the core mold part from the cavity mold part to thereby remove the thread from the thread-

forming portion of the cavity mold part (Figures 4-6). Although Cole does not explicitly show means for separating the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded product on the core mold part, he clearly discloses that his movable mold pieces can be moved in any desired sequence, as is well-known in the art (Column 6, lines 60-68). Therefore, it would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made to provide means to separate the core mold part from the cavity mold part to thereby remove the thread from the thread-forming portion of the cavity mold part while retaining the molded product on the core mold part in order to satisfy specific process or end-use requirements.

Response to Arguments

Applicant's arguments filed 19 April 2006 have been fully considered but they are not persuasive.

Applicant contends that Cole does not show the claimed process because he does not show a manufacturing step for removing a portion of the closed end of the molded product. This is not persuasive because a manufacturing step for removing a portion is not necessarily claimed. As currently claimed, the removal is only required to take place after the product is removed from the core mold part. Therefore, when the portion of the molded product is eventually removed, the limitation of having a "manufactured hollow plastic product with two open ends" is, in fact, met by Cole since he shows a product that has been manufactured and now has two open ends. With regard to the manufacturing means, it is noted that Cole manufactures his product to include elements that contribute to the removal of the portion of the closed end of the

product. It is being interpreted that said elements (e.g. Figure 2, element 28) satisfy the new apparatus limitations.

Applicant contends that Cole does not show the formation of threads at the outside of one end of the product. This is not persuasive because it appears in Figure 5 that Cole does show threads that are closer to the bottom end of the molded article than to its top section.

Applicant contends that Cole does not show a core mold part that includes a generally cylindrical portion for forming at least an inside segment of the substantially tubular section of the product and an inner core that is movable relative to the generally cylindrical portion for forming a portion of the product lying inside the thread when the inner core is protracted. This is not persuasive because this limitation is suggested by Cole in Figure 3, e.g. element 119, 111.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monica A. Huson whose telephone number is 571-272-1198. The examiner can normally be reached on Monday-Friday 7:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Monica A Huson
May 1, 2006

MICHAEL P. COLAIANNI
SUPERVISORY PATENT EXAMINER